# What are the greatest inland monitoring needs for Central Valley salmonids?

...ideas, insights, random thoughts, and ramblings of a Central Valley fishery biologist

#### I have a MONITORING dream...





### Top Ten

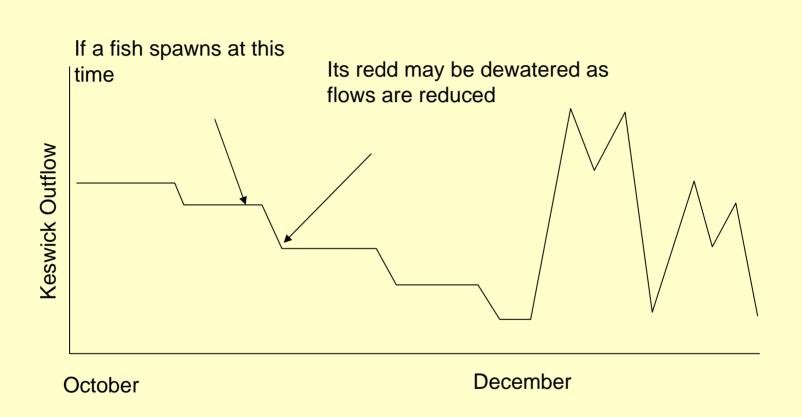
## Salmonid Monitoring Needs in the Inland Central Valley

#### Lester

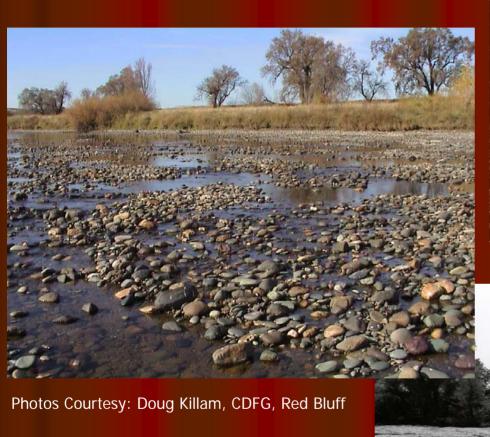




#### Effects of Flow Management on Redd Dewatering



Water management during the fall dewaters fall Chinook salmon redds in the Sacramento River









Age Structure of Chinook Salmon

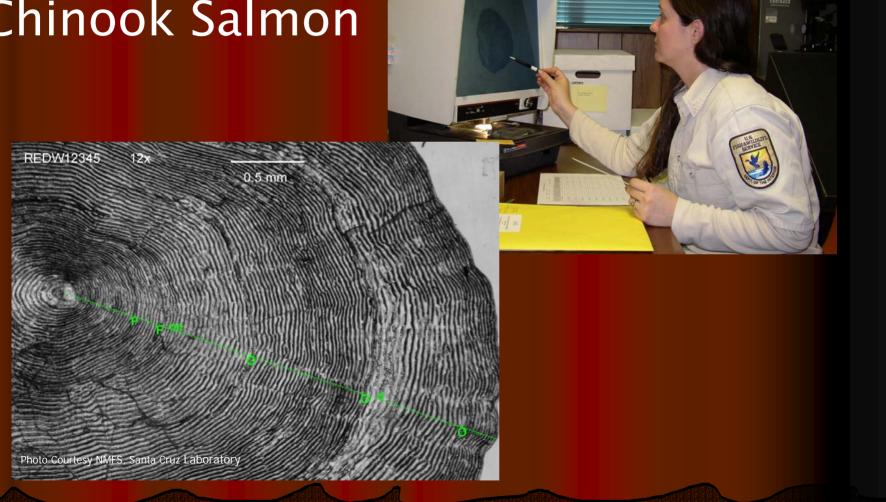


Photo Courtesy USFWS Red Bluff, Clear Creek Monitoring



#### The Lower Sacramento River





#### Inland Harvest Monitoring



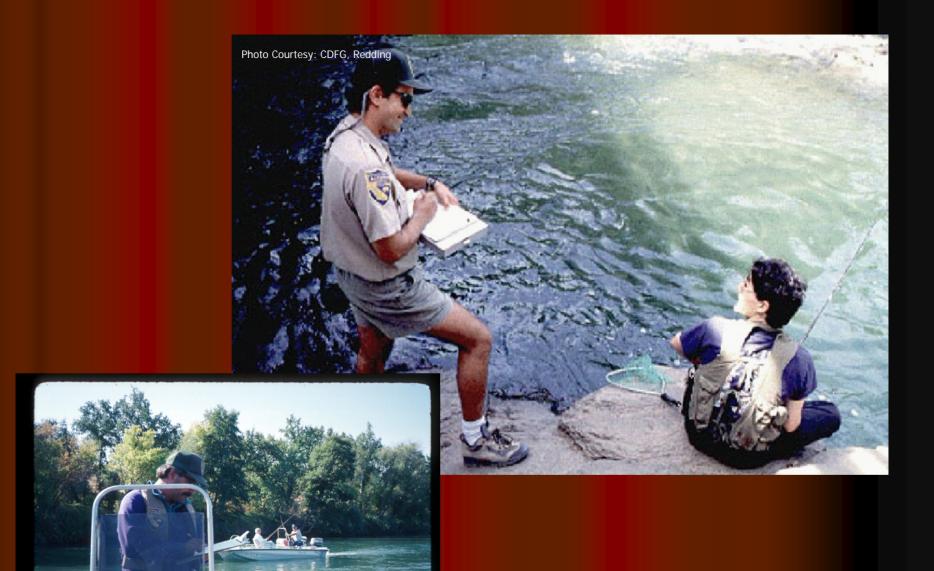


Photo Courtesy: Duane Massa, CDFG





#### **Snorkel Surveys**

Photo Courtesy: USFWS, Red Bluff, Clear Creek Monitoring

#### **Aerial Redd Surveys**



## Mark and Recapture Carcass Surveys









#### Steelhead / Rainbow Trout





## Differentiating Hatchery and Natural Fish













#### Juvenile Salmonid Abundance



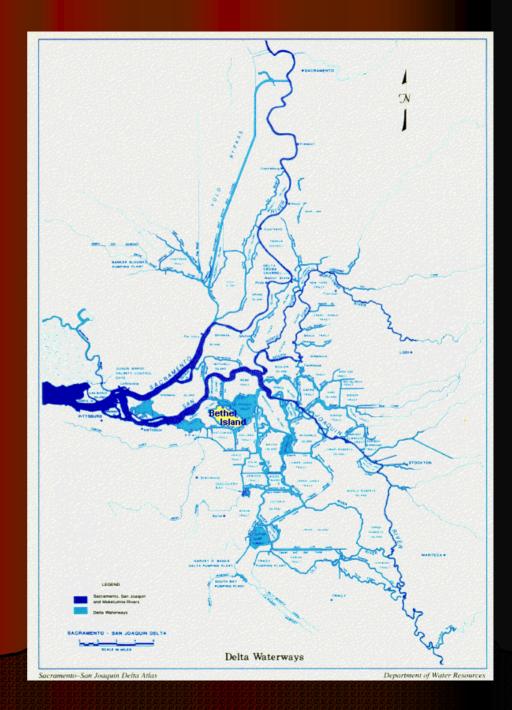




#### Emigration through the Delta

Including, studying the effects due to CVP and SWP operations...

And the Delta inroutes at the Cross Channel and Georgiana Slough





#### Using New Technologies...



Photo Credit: Dennis Rondorf, USGS



Photo Courtesy: Vemco, Inc.



Photo Credit: Dave Vogel, Natural Resource Scientists

Time for Questions, Comments, & Discussion

